

DRAFT Attachment 5-WRD 10.06
Hazard Analysis Guidelines for Risk Factor 9
Repeated Impact
Department of Labor and Industries
WISHA Services Division

This document will assist inspectors in reviewing work sites where caution zone jobs have been identified. The inspector does not have to evaluate every job, but can use the following strategy for representative sampling. Inspectors will use Appendix B of the rule (WAC 296-62-05174) to evaluate whether there are hazard zone jobs. However, the employer has the option to use an analysis tool other than Appendix B. In cases where the employer is relying upon an alternative analysis tool, the inspector will need to request that an ergonomist assist them in these inspections.

This attachment contains the following sections to assist inspectors in making their determinations:

- Typical clues to recognize Repeated Impact
- Typical jobs where hazard zone risk factors for Repeated Impact are found.
- Tips on measuring Repeated Impact
- Examples of acceptable methods of hazard analysis when using the general approach
- Typical controls chart

The caution zone criteria for Repeated Impact are:

- Using the hand or knee as a hammer more than 10 times per hour more than 2 hours total per day

The hazard zone risk factors for Repeated Impact per Appendix B (WAC 296-62-05174) are:

- Hand -- using the hand (heel/base of palm) as a hammer more than once per minute-more than 2 hours per day.
- Knee -- using the knee as a hammer more than once per minute-more than 2 hours total per day.

Typical clues to recognize the risk factor: Repeated Impact

- Worker pounds objects with the heel/base of the hand in order to deliver a quick forceful impact like a hammer.
- Worker uses his/her knee to deliver a quick forceful impact.

Typical jobs where Repeated Impact CZJ/HZJ risk factors are often found:

Risk Factors	Typical Jobs
Using hand (heel/base of palm) as a hammer	<ul style="list-style-type: none"> • Assembly process with tight fitting parts
Using the knee as a hammer	<ul style="list-style-type: none"> • Carpet layers

Tips on measuring the risk factor Repeated Impact:

- For any single minute of the day that the worker delivers at least two hand or knee strikes as a hammer, this counts as one minute of exposure to repeated impacts. Total exposure time must exceed two hours to be considered a hazard.

Examples of acceptable methods of hazard analysis for Repeated Impact (acknowledged by the general performance approach within the rule):

- Not applicable as other methods do not specifically mention this risk factor with a method to measure or quantify the risk.

Typical Controls Chart for Repeated Impact:

Risk Factor	Typical Control
Hand as a hammer	<ul style="list-style-type: none">• Use a rubber mallet or other padded tools to strike with instead of a hand• Develop an alternative method/tool to reduce the force requirement or the need to pound with the hand• Press objects into place using levers, or hydraulic or pneumatic tools• Cover sharp or hard objects with pads
Knee as a hammer	<ul style="list-style-type: none">• Use a different tool that reduces the need to use the knee kick method (power stretcher for carpet laying).• Press objects into place using levers, or hydraulic or pneumatic tools• Relocate knee switches so that the thigh or the foot presses them